Fall 2009 Climate Information

Fall 2009 began on Tuesday, September 22, 2009 at 418 PM CDT, and will end at 1147 AM CST, Monday, December 21, 2009, when the Winter of 2009/2010 officially begins.

The table below lists a climate summary of 30 Year Normals from 1971 to 2000, and a few extremes of the climate record for Austin, Del Rio, and San Antonio for September through December. For Precipitation, the latest 30 Year Normal for 1971 to 2000 is shown under Average Rainfall, and the All Time Driest and Wettest September, October, November and December of Climate Record is shown.

Austin/Mabry

Month	High	Low	All time High	All time Low	Average Rainfall	All Time Driest	All Time Wettest
September	90.1	68.8	112	41	2.91	0	20.78
October	81.4	59.8	100	30	3.97	0	12.63
November	70.1	49.3	91	20	2.68	0	14.10
December	62.3	41.9	90	4	2.44	0	16.14

Austin/Bergstrom

Month	High	Low	All time High	All time Low	Average Rainfall	All Time Driest	All Time Wettest
September	90.1	68.9	112	45	2.88	0.02	9.36
October	81.8	59.7	98	32	3.99	0	13.08
November	70.9	50.1	90	20	3.02	Trace	12.49
December	63.2	42.5	91	6	2.53	0.01	12.88

Del Rio

Month	High	Low	All time High	All time Low	Average Rainfall	All Time Driest	All Time Wettest
September	90.6	69.4	110	43	2.06	Trace	15.79
October	81.7	60.5	106	28	2.00	0	11.69
November	70.9	49.2	96	17	0.96	0	4.71
December	63.5	41.2	90	10	0.75	Trace	3.93

San Antonio

Month	High	Low	All time High	All time Low	Average Rainfall	All Time Driest	All Time Wettest
September	90.0	68.8	111	41	3.00	0.01	15.78
October	82.0	59.4	99	27	3.86	Trace	18.07
November	71.4	48.6	94	21	2.58	0	9.46
December	64.0	40.8	90	6	1.96	0	13.96

Temperature Extremes

Cold weather in the Fall of 1976 made the Fall of 1976 the coldest Fall of record for San Antonio, 1885 to 2008, and for Del Rio, 1905 to 2008. Austin's all time coldest fall of record, 1854 to 2008, came in the Fall of 1880. Following the extreme heat in the summer of 1980 and 1989, a few brisk cool fronts made their way through the area in October of 1980 and October of 1989. In late October 1993, a strong cold front came through, and established record October low temperatures at Del Rio, 28, and San Antonio, 27, with a tie of 30 at Austin.

The average date of the first freeze in fall for South Central Texas varies from around Early to Mid November in the Hill Country to Early December over southern portions of South Central Texas. Freezes have been observed as early as late October, and the last of such an occurrence was in late October 1993. In some years the first freezes have waited until the December to March Period. The average temperature usually decreases the fastest from October to November. October, like February, can have many dynamic swings in conditions from warm to cold and wet to dry. Following the early September extreme heat wave in September of 2000, conditions cooled off early and rather quickly from September to October of 2000.

Warm periods have shown up and approached summer like conditions in the past on Autumn Days. Since 1900 the warmest fall of record for Austin, Del Rio and San Antonio came in 1931. In some years some of the hottest days of the year, in the modified subtropical climate over South Central Texas, have come as late as late September to early October.

In 2005, the hottest days of the year came on September 25 and 26. Record high temperatures for the Fall Season were established at Austin, Del Rio and San Antonio on September 25th, and the Fall record was tied at Austin Mabry on September 26th. The September 25, 2005 highs were as follows: Austin Bergstrom 108; Austin Mabry 107; Del Rio 107; and San Antonio 105. On September 26, 2005 the highs were 107 at Austin Bergstrom and Austin Mabry; 106 at Del Rio; and 103 at San Antonio.

In 1979 on October 3rd Del Rio's high of 106 tied the 1979 high of 106 observed in the summer of 1979. San Antonio's high of 98 and Austin's high of 97 October 3, 1979 also tied the 1979 high that had occurred in the summer of 1979. On October 2, 1938, Austin had its warmest and only 100 degree day of that year, when the high reached 100. In 1923 the high at Austin was also 100 on October 2nd. In October 1991 an unseasonably warm period caused highs to rise to 99 on October 12 at San Antonio, 98 at Austin and 95 at Del Rio. On November 4, 1988, highs rose to 94 at

San Antonio, 89 at Austin and 96 at Del Rio. On December 11, 1987, warm and clear weather affected the area, with highs rising to 88 at San Antonio; 82 at Austin and 89 at Del Rio.

Rainfall Extremes

Rainfall trends have been very extreme, from wet to bone dry. Since 1970 the falls of 1979, 1988, 1999, 2007, and 2008 were very dry. At Austin and San Antonio since 1970, the falls of 1973, 1985, 1994, 1998, 2000, 2001, 2002 and 2004 have been rather wet. Additional wet Autumns for Austin came in the Fall of 1974 and 1986. For Del Rio, since 1970, rainy falls came in 1970, 1990, 1991, 2000, and 2004. During the floods and heavy rain event of October 1998, the heavy rains fell east of Del Rio. In the past 30 years, October rains were rather extreme in 1981, 1994, 1998, 2002, and 2004. In October 1981, first the remnants of Hurricane Norma from the Pacific moved over the region aloft and caused a heavy rain event. Late in October 1981, a slow moving cool front and nearly stalled upper-level trough created another heavy rain event, with plenty of high level moisture from the remnants of Hurricane Otis to the southwest over Western Mexico. In October 1994, a heavy rain event with thunderstorms moved through the Austin and San Antonio Areas on Friday Night October 7th, and in the early morning of Saturday October 8, 1994. Another rain event affected the area about a week later from the remnants of Hurricane Rosa that moved over the area aloft and another heavy rain event formed, in association with a slow moving upper-level trough from the west. The heaviest rains in this event fell over the eastern part of South Central Texas, with even heavier rains over Southeast Texas. After plentiful rains in September 1998, from the effects of Tropical Storm Frances, extreme floods in October 1998 came and were caused by a slow moving cool front, multiple meso-scale boundaries, a slow moving upper-level trough, by abundant low level moisture from the Gulf of Mexico, and by high level moisture from the southwest, left by the remnants of Pacific Tropical Storms over the Eastern Pacific Ocean and Western Mexico.

The fall of 1982 started dry, then turned into a stormy period with the Strong El Nino/Southern Oscillation Event of 1982-83, that continued into the winter of 1982-83 and spring of 1983. The Fall of 1982 rains began to increase in late November. Likewise the fall of 1991 started out dry, then turned into a wet and stormy period from December 1991 to the Spring of 1992, in the El Nino/Southern Oscillation Event of the early 1990s. In the late 1990's another stormy period showed up from December 1997 through March 1998, associated with the 1997/1998 El Nino/Southern Oscillation Event. The Fall of 2000 was also a stormy period for Fall. A stormy event, with flash flooding, came in the Fall of 2001. On November 15, 2001, a severe weather and flash flood event broke out over parts of Central and South Central Texas. The Fall of 2002 brought a series of severe weather and heavy rain events also. In the Fall of 2004 heavy rains in October and November caused flooding.

November 2004 ended up the wettest November of record for Austin Mabry, San Antonio and Del Rio. November 2004 was the 3rd wettest November of Record at Austin Bergstrom. Even though it was the wettest of record at San Antonio, with 9.46 inches of rain, and wettest for Del Rio with 4.71 inches of rain, the long history of Fall and Early Winter Monthly Rainfall from October to December shows months that have had between 10 and 20 inches of rain in the area. November 2004 rain at Austin Mabry was direct evidence of this with a record 14.10 inches of rain, the wettest November since 1856. Austin Bergstrom had 9.91 inches, the 3rd wettest November of Record, after 10.51 inches in November 2001 and 12.49 inches in November of 1974. On November 15, 2001, a flood event came to the area, with very heavy rains and severe weather in the Austin Area to San Antonio. Rainfall amounts on November 15, 2001 were as follows: Austin Bergstrom 8.68

inches; Austin Mabry 7.55 inches; and San Antonio 2.18 inches. October 1998, another extreme rain example for a Fall month, brought between 15 and near 30 inches of rain. Another 15 to 30 inch rain event came to Southeast Texas in October 1994. Floods came during Christmas of 1991, when between 10 and 20 inches of rain fell in the area in December of 1991.

In November of 1974 a flood event came to Austin on November 23rd. In this heavy rain event Austin picked up 4.62 inches on the 23rd, at Austin Mueller Airport, and 0.47 inches on the 24th. Austin Bergstrom picked up 8.70 inches of rain November 23, 1974 and an additional 1.18 inches November 24, 1974.

A few December flood events have also affected the area in the past. In the 1980s, heavy rain events came to South Central Texas in late December 1984 and December 1986. A heavy rain event affected Southeast Texas in December of 1982. In December of 1913 floods came to the area also. From December 1 to 4, 1913, widespread floods came to Central and Southeast Texas, plus parts of South Central Texas. San Marcos received 15.5 inches of rain in one day. Austin received 10.66 inches of rain on the 3rd and 4th. Some parts of San Antonio got 7 inches of rain in one day; however the official amount on December 4th, 1913 was 2.02 inches. Another flood event came to the area in late December 1991. From past climate records, it can be seen that flooding has been a Fall and Winter Weather Hazard for Central and South Central Texas.

Winter Precipitation

In late October of 1993, the earliest date of observed snowfall was observed at Del Rio and San Antonio on October 30th, 1993, when Del Rio had 1.2 inches and San Antonio a Trace. The heaviest snowfall of record for Austin so far, came in the Fall, on November 11, 1937, when 9.7 inches of snow was measured. This exceeded the record winter snow of record for Austin of 6.5 inches January 30, 1949. In November 1996, a late November winter precipitation event affected the Texas Hill Country and adjacent parts of Central and South Central Texas. In early October of 2000, a few days of unseasonably cold weather affected the area from October 7th to 10th, 2000. The Fall of 2000 was cooler, wetter and stormier than normal. At the end of the Fall of 2000, a freezing precipitation event affected the area December 12th and 13th, then clearing skies followed in the late morning and afternoon of the 13th. In late November 2001 a winter precipitation event affected the Texas Hill Country and parts of Central and South Central Texas on November 28 to the predawn hours of November 29. A trace of snow was observed at Del Rio and Austin. In the northern part of Val Verde County, snowfall near 2 to near 6 inches was observed on November 28, 2001. On December 7, 2005 to the early morning hours of December 8, 2005 a winter precipitation event affected the area. A wave of cold arctic air moved across the region on December 7th and was accompanied by a rain making weather system aloft. This brought precipitation in the afternoon to evening of the 7th, that changed to freezing rain and sleet in the late afternoon and evening over parts of the Hill Country to Central Texas, in the Austin Area, and south to the San Antonio Area. The freezing rain continued in the early morning hours of December 8th over the eastern parts of South Central Texas. The most freezing rain affected Williamson, Travis, Comal, Hays and Lee Counties. On December 9, 2008 another early December winter precipitation event affected parts of Central and South Central Texas. After temperatures warmed to the 70s and 80s during the day of December 9th 2008, temperatures fell 40 to 50 degrees in 6 to 12 hours in wake of a fast moving cold front. A winter precipitation event followed the evening of December 9th to the early morning hours of December 10th, 2008.

Wind Chill

In Year 2001 the NWS changed the way wind chill was reported. For information on wind chill, See Wind Chill Chart.